

### ABSTRACT

A method and associated systems for processing and displaying three-dimensional medical imaging data of a subject anatomical volume is described in which a plurality of thick-slice images is computed and displayed, each thick-slice image  
5 corresponding to a thick-slice or slab-like subvolume of the anatomical volume substantially parallel to a standard x-ray view plane for that anatomical volume. The thick-slice or slab-like subvolumes have a thickness generally related to a lesion size to be detected and/or examined. The described thick-slice processing and display is generally applicable for any anatomical volume (*e.g.*, chest, head, abdomen, breast, etc.)  
10 having associated standard x-ray views (*e.g.*, PA, lateral, CC, MLO, etc.) that is also amenable to one or more three-dimensional imaging modalities (*e.g.*, MRI, CT, SPECT, PET, ultrasound, etc.). According to one preferred embodiment in which the particular three-dimensional imaging modality is CT imaging, thick-slice processing and display is used to facilitate reduced screening radiation dosage.

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